

ABSTRACT

The object of the present invention is to provide a plated steel sheet capable of securing excellent post-painting corrosion resistance and brightness, and the present invention makes it possible to produce a plated steel sheet excellent in post-painting corrosion resistance and paint coat image clarity by further adding one or more elements selected from among 0.01 to 0.5% of Ca, 0.01 to 0.2% of Be, 0.0001 to 0.2% of Ti, 0.1 to 10% of Cu, 0.001 to 0.2% of Ni, 0.01 to 0.3% of Co, 0.0001 to 0.2% of Cr and 0.01 to 0.5% of Mn, in mass, to the plated layer of the plated steel sheet which is characterized in that the center line average roughness Ra of the Zn alloy plated steel sheet is 1.0  $\mu\text{m}$  or less and the filtered waviness curve  $W_{\text{CA}}$  thereof is 0.8  $\mu\text{m}$  or less, the Zn alloy plated steel sheet having on the surface thereof the plated layer containing 1 to 10% of Mg, 2 to 19% of Al and 0.001 to 2% of Si in mass and other elements the total amount of which is suppressed to 0.5% or less in mass, with the balance consisting of Zn.